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16. Abstract  <p>The Standard Penetration Test (SPT) is the most common in-situ test used for foundation design and other geotechnical applications in Florida. The results of the test, the N-value, are used with many empirical correlations to determine important soil properties used in design. Contrary to the implication of its name, the SPT is not all that standard, and test results may vary even for identical soil conditions.</p> <p>While many variables affect the N-value, a strong relationship exists between N-value and the energy that the SPT hammer transfers to the drill rods. If the energy transfer characteristics of an SPT system (the drill rig, hammer, operator, etc.) are known, then the N-values recovered by that system may be corrected to a standardized energy and more appropriately used in design.</p> <p>This report documents a field testing program in which energy transfer measurements were performed for 58 SPT systems. Energy measurements were made using the SPT Analyzer™. Drilling operations were not controlled but were performed under normal operating conditions. The resulting data are presented, and assessments are made of the effects of automatic versus safety hammer type, drill rig type, drill rod length, drill rod type, hammer drop height, hammer blow rate, number of rope turns, N-value, and two energy calculation methods.</p>			
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